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PTO/SB/08A (10-01)

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Trademark Subclass 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

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of

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Complete if Known

Application Number	10/053,354
Filing Date	November 2, 2001
First Named Inventor	Rosenthal, Dan E.
Art Unit	2123
Examiner Name	Unassigned

Attorney Docket Number

020910-000210US

### U.S. PATENT DOCUMENTS

Examiner	Cite No. <sup>1</sup>	Document Number Number Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
CVL	AA	US 6,512,997	1/28/2003	Padilla, et al.	
CVL	AB	US 6,253,166	6/26/2001	Whitmore, et al.	
CVL	AC	US 6,185,506	2/6/2001	Cramer, III, et al.	
CVL	AD	US 6,161,080	12/12/2000	Aouni-Ateshian, et al.	
CVL	AE	US 6,150,179	11/21/2000	Went	
CVL	AF	US 6,125,235	9/26/2000	Padilla, et al.	
CVL	AG	US 6,081,766	6/27/2000	Chapman, et al.	
CVL	AH	US 6,014,449	1/11/2000	Jacobs, et al.	
CVL	AI	US 5,799,312	8/25/1998	Rigoutsos	
CVL	AJ	US 5,787,279	7/28/1998	Rigoutsos	
CVL	AK	US 5,777,889	7/7/1998	Mohanty, et al.	
CVL	AL	US 5,752,019	5/12/1998	Rigoutsos, et al.	
CVL	AM	US 5,745,385	4/28/1998	Hinsberg, III, et al.	
CVL	AN	US 5,625,575	4/29/1997	Goyal, et al.	
CVL	AO	US 5,553,004	9/3/1996	Gronbech-Jensen, et al.	
CVL	AP	US 5,307,287	4/26/1994	Cramer, III, et al.	

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### FOREIGN PATENT DOCUMENTS

Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
CVL	AQ	WO	02/073334	A2	07-26-1990	Padilla, et al.	<input type="checkbox"/>
CVL	AR	WO	01/67310	A1	12-12-1991	Smith, et al.	<input type="checkbox"/>
CVL	AS	WO	96/24902	A1	04-01-1993	Wertz	<input type="checkbox"/>

Examiner Signature

Date Considered

6/27/05

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Substitute for Form 1449B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Complete If Known	
Sheet	2	of	4	Application Number	10/053,354
				Filing Date	November 2, 2001
				First Named Inventor	Rosenthal, Dan E.
				Art Unit	2123
				Examiner Name	Unassigned
				Attorney Docket Number	020910-000210US

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**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
CVL	AT	ASCHER, et al., <u>Computer Methods for Ordinary Differential Equations and Differential-Algebraic Equations</u> , 1998, pgs. 3-122 and 231-297, SIAM, Philadelphia, PA.	
CVL	AU	BARAFF, et al., "Large steps in cloth simulation", 1998, <u>Computer Graphics Proceedings SIGGRAPH 98</u> (Orlando, July 19-24) p43.pdf	
CVL	AV	BARTH, et al., "A separating framework for increasing the timestep in molecular dynamics" in <u>Computer Simulation of Biomolecular Systems - Theoretical and Experimental Applications, Volume 3</u> , 1997, pgs. 97-121, Kluwer AcademicDordrecht, The Netherlands.	
CVL	AW	BERENDSEN, "Molecular Dynamics Simulations: The Limits and Beyond" in <u>Computational Molecular Dynamics: Challenges, Methods, Ideas</u> , 1999, pgs. 3-36, Springer-Verlang, Germany.	
CVL	AX	BISCHOF, et al., <u>ADIFOR 2.0 Users' Guide</u> , 1998, Argonne National Laboratory, University of Chicago, Argonne, IL.	
CVL	AY	BRENAN, et al., <u>Numerical Solution of Initial-Value Problems in Differential-Algebraic Equations</u> , 1989, Chapter 5 (pgs. 115-148), Elsevier Science Publishing Co., New York, NY.	
CVL	AZ	BUTCHER, "Towards efficient implementation of singly-implicit methods", 1988, <u>AMC Transactions of Mathematical Software</u> 14:68-75.	
CVL	BA	BYSTROFF, "An alternative derivation of the equations of motion in torsion space for a branched linear chain", 2001, <u>Protein Engineering</u> 14:825-828.	
CVL	BB	COLEMAN, et al., "The efficient computation of sparse Jacobian matrices using automatic differentiation", 1996, Cornell Theory Center Technical Report CTC95TR225.	
CVL	BC	EICHLERGER, et al., "The benefits of parallel multibody simulation", 1994, <u>International Journal for Numerical Methods in Engineering</u> , 37:1557-1572.	
CVL	BD	GOLUB, et al., "The Differentiation of Pseudo-Inverses and Non-Linear Least Squares Problems Whose Variables Separate", 1973, <u>SIAM J. Numer Anal.</u> 10:413.	
CVL	BE	HAIRER, et al., <u>Solving Ordinary Differential Equations II: Stiff and Differential-Algebraic Problems</u> , 2nd ed., 1996, Springer-Verlang, Germany.	
CVL	BF	HE, et al., "Macromolecular conformational dynamics in torsional angle space", 1998, <u>Journal of Chemical Physics</u> 108:271.	
CVL	BG	HOLLARS, et al., <u>SD/FAST User's Manual, Version B.2</u> , 1994, Symbolic Dynamics, California.	

Examiner Signature	<i>Not Releevant</i>	Date Considered	9/27/03
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Sheet 3 of 4

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CVL	BH	IZAGUIRRE, et al., "Longer Time Steps for Molecular Dynamics", 1999, <i>J.Chem.Phys.</i> 110:9853.		
CVL	BI	KANE, <i>Dynamics</i> , 3rd ed., 1978, Stanford University, Stanford, California.		
CVL	BJ	LEACH, <i>Molecular Modelling Principles and Applications</i> , 2nd ed., 1996, Chapter 6 (pgs. 303-352) Pearson Education Limited, England.		
CVL	BK	MARTINS, et al., "An automated method for sensitivity analysis using complex variables", 2000, <i>American Institute of Aeronautics and Astronautics</i> , 2000-0689 p1		
CVL	BL	MOROKUMA, et al., "Model studies of the structures, reactivities, and reaction mechanisms of metalloenzymes", 2001, <i>IBM J. Res. &amp; Dev.</i> 45(3/4):367-395.		
CVL	BM	NORSETT, et al., "Embedded SDIRK-methods of basic order three", 1984, <i>BIT</i> 24:634-646.		
CVL	BN	PONDER, <i>TINKER User's Guide, Version 3.8</i> , October 2000, Washington University, St. Louis, MO.		
CVL	BO	RAPAPORT, <i>The Art of Molecular Dynamics Simulation</i> , 1995, reprinted with corrections 1998, Chapter 3 (pgs. 42-77), Cambridge University Press, United Kingdom.		
CVL	BP	SCHLICK, "Biomolecular Dynamics at Long Timesteps: Bridging the Timescale Gap Between Simulation and Experimentation", 1997, <i>Annu. Rev. Biophys. Biomol. Struct.</i> , 26:181-222.		
CVL	BQ	SCHLICK, "Some Failures and Successes of Long-Timestep Approaches to Biomolecular Simulations" in <i>Computational Molecular Dynamics: Challenges, Methods, Ideas</i> , 1999, pgs. 227-262, Springer-Verlag, Germany.		
CVL	BR	SCHLICK, <i>Molecular Modeling and Simulation - An Interdisciplinary Guide</i> , 2002, Chapter 13 and References, pgs. 419-462 and 561-619, Springer-Verlag, Germany.		
CVL	BS	SHAMPINE, "Implementation of implicit formulas for the solution of ODEs", 1980, <i>SIAM J. Sci. Stat. Comput.</i> 1:103-118.		
CVL	BT	VERLET, "Computer Experiments on Classical Fluids. I. Thermodynamical Properties of Lennard-Jones Molecules", 1967, <i>Physical Review</i> , 159(1):98-103.		
CVL	BU	VON SCHWERIN, <i>Multibody System Simulation</i> , 1999, Springer-Verlag, Germany.		

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CVL	BV	WU, et al., "Constraint dynamics algorithm for simulation of semiflexible macromolecules", 1998, <u>Journal of Computational Chemistry</u> 19:1555-1566	
CVL	BW	YEN, et al., "On the numerical solution of constrained multibody dynamic systems", 1994, <u>University of Minnesota AHP CRC</u> 94-038.	

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Examiner Signature		Date Considered	6/27/05
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November 2 2001

Rosenthal, Dan F

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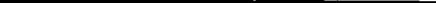
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#### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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CVL			ABAGYAN, et al., "New Methodology for Computer-Aided Modelling of Biomolecular Structure and Dynamics 2. Local Deformation Cycles", 1989, <u>Journal of Biomolecular Structure &amp; Dynamics</u> 6(4):833-845.	
CVL			GIBSON, et al., "Variable Step Molecular Dynamics: An Exploratory Technique for Peptides with Fixed Geometry", 1990, <u>Journal of Computational Chemistry</u> 11(4):468-486.	
CVL			JAIN, et al., "Linearization of Manipulator Dynamics Using Spatial Operators", 1993, <u>IEEE Transactions on Systems, Man and Cybernetics</u> 23(1):239-248.	
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CVL			MAZUR, et al., "New Methodology for Computer-Aided Modelling of Biomolecular Structure and Dynamics 1. Non-Cyclic Structures", 1989, <u>Journal of Biomolecular Structure &amp; Dynamics</u> 6(4):815-832.	
CVL			PESKIN, ET AL., "Molecular Dynamics by the Backward-Euler Method", 1989, <u>Communications on Pure and Applied Mathematics</u> XLII:1011-1031.	
CVL			ROSENTHAL, et al., "High Performance Multibody Simulations via Symbolic Equation Manipulation and Kane's Method", 1986, <u>The Journal of the Astronautical Sciences</u> , 34(3):223-239.	
CVL			ROSENTHAL, "An Order n Formulation for Robotic Systems", 1990, <u>The Journal of the Astronautical Sciences</u> , 38(4):511-529.	
CVL			ROSENTHAL, "Engineers Notes: Triangulation of Equations of Motion for Robotic Systems", 1988, <u>The Journal of Guidance</u> , 11(3):278-281.	
CVL			SCHLICK, et al., "A molecular dynamics simulation of a water droplet by the implicit Euler/Langevin scheme", 1991, <u>J. Chem. Phys.</u> , 94(3):2118-2129.	
CVL			ZHANG, et al., "The Langevin/implicit-Euler/normal-mode scheme for molecular dynamics at large timesteps", 1994, <u>J. Chem. Phys.</u> , 101(6):4995-5012.	

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